

- 8. The aircraft automatically sprays liquid and calibrates the flow meter.
- 9. The DJI MG app will display that calibration is complete. You may now begin regular operation.

- ☀️ • During calibration, tap ●●● > ⌂ to cancel. The accuracy of the flow meter will be the data before calibration.
- If you exit calibration before it is complete, data protection and operation resumption function are still available. Calibration will continue after resuming operation.

When to Recalibrate

- 1. Installing a different nozzle model. Note: choose the corresponding model in the DJI MG app after replacing nozzles. Go to Operation View > ●●● > ⌂ for configuration.
- 2. Using a liquid of a different viscosity.
- 3. The error between the actual value and the theoretical value of the completed area is more than 15%.

Starting and Stopping the Motors

Starting the Motors

The Combination Stick Command (CSC) listed below is used to start and stop the motors. Ensure you perform the CSC in one continuous motion. The motors will begin to accelerate to an idle speed. Release both sticks simultaneously. Take off immediately after the motors are spinning, or else the aircraft may lose balance, drift, or even takeoff by itself and risk damage or harm.



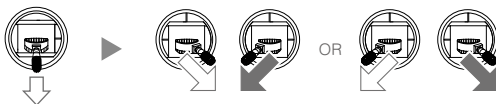
Stopping the Motors

There are two methods to stop the motors.

- 1. When the aircraft has landed, push the throttle down and hold. The motors will stop after three seconds.




- 2. When the aircraft has landed, push the throttle stick down, then perform the CSC command to stop the motors. Release both sticks once the motors have stopped.





- Take off immediately after the motors are spinning, or else the aircraft may drift and cause damage or harm.
- Rotating propellers can be dangerous. DO NOT start the motors in narrow spaces or when there are people nearby.
- Always keep your hands on the remote controller when the motors are spinning.
- If you perform the CSC when the aircraft is airborne, the motors will stop and cause the aircraft to crash. Never stop the motors mid-flight, unless in emergency situations when doing so can reduce the risk of damage or harm.
- When using method 2 to stop the motors, the aircraft may tip if it doesn't touch the ground completely. Please use method 2 with caution. It is recommended to stop the motors via method 1.

Flight Test

1. Place the aircraft near the operation area with the Aircraft Status Indicator facing you.
2. Power on the remote controller. Connect the battery to the communication port, then the XT90 port.
3. Go to Operation View in the DJI MG app > ●●● >  > Connected DJI Device Type. Make sure to choose "MG-1S". Set the Flight Mode switch to P and the Operation Mode switch to M.
4. When using with the MG-1S RTK aircraft:
Ensure that the "RTK Module" is enabled and RTK data source is correctly set (D-RTK Base Station). Go to Operation View in the DJI MG app > ●●● > RTK > RTK Module to enable "RTK Module" and select the correct data source.
Make sure to disable "RTK Module" if RTK is not used. Otherwise, the aircraft cannot take off when there is no RTK data.
5. When the GNSS signal is strong, perform the CSC command to start the motors.
6. Push the throttle stick up to take off.
7. Select the desired operation or flight mode and spray liquid.
8. Exit the task to manually control the aircraft for landing. Hover over a level surface and gently pull down on the throttle stick to slowly descend.
9. After landing, push the throttle down and hold. The motors will stop after three seconds.
10. Disconnect the battery from the XT90 port, then the communication port. Power off the remote controller.



- When the Aircraft Status Indicator rapidly blinks yellow during flight, the aircraft has entered Failsafe mode.
- The low battery level warning is triggered when the Aircraft Status Indicator slowly blinks red. Fly the aircraft back and land it as soon as possible, stop the motors, and replace the battery. The critical low battery level warning is triggered when the Aircraft Status Indicator rapidly blinks red. The aircraft will begin to automatically descend and land.

DJI Assistant 2

Configure settings of the remote controller and flying parameters, copy flight records, use the flight simulator, and update aircraft firmware in the DJI Assistant 2 app.

Installation and Launching

1. Download the DJI Assistant 2 installation file from the MG-1S download page:
<http://www.dji.com/mg-1s/info#downloads>
2. Install the software.
3. Launch DJI Assistant 2.

Using DJI Assistant 2

Connect the Micro USB port of the aircraft to your computer with a Micro USB cable. Then power on the aircraft.



Be sure to remove the propellers before using DJI Assistant 2.

Dashboard

Check all basic settings on this page. Click the blue hyperlinks for detailed settings.

Basic Settings

Remote Controller

Configure channel mapping and calibrate the remote controller.

ESC

Configure idle speed of and test the motor.

Flight Settings

Power

Basic gain and power bandwidth settings. It is recommended to use the default settings.

Gain

Advanced gain and sensitivity gain settings. It is recommended to use the default settings.

Failsafe Settings

Select the Failsafe action of the aircraft between hover and RTH, set RTH altitude (not beyond the maximum altitude) and the aircraft's heading during RTH.

Battery

Configure the threshold and the aircraft actions of low battery warnings.

Flight Restriction

Set the maximum altitude (up to 50 m). Enable or disable distance limit and set the value (up to 1000 m).

Tools

Topology

View system status and error information. Click the A3 flight controller icon to enter IMU calibration. View and calibrate IMU status.

Flight Record

Enter SD card mode and copy the flight record.

Backup

Backup and restore the flight controller settings.

Simulator

Click Open to enter flight simulation and practice flight. Click Start Simulation and aircraft attitude data (e.g., roll, pitch, yaw) will be shown on the right of the screen.

Firmware Update

A DJI account is required for firmware updates. Login with your DJI account or register for one.

Radar

Shows radar module information in order to fix any issues. If the module is connected, Software version, hardware ID, loader, and other information will be shown. If not connected, the information above will not appear.

Appendix

Specifications	
Airframe	
Diagonal Wheelbase	1515 mm
Frame Arm Length	625 mm
Dimensions	MG-1S: 1471 mm × 1471 mm × 482 mm (Frame arms unfolded, propellers removed) 780 mm × 780 mm × 482 mm (Frame arms folded)
	MG-1S RTK: 1471 mm × 1471 mm × 522 mm (Frame arms unfolded, propellers removed) 780 mm × 780 mm × 522 mm (Frame arms folded)
Propulsion System	
Motors	
Stator Size	60×10 mm
KV	130 rpm/V
Max Thrust	5.1 kg/rotor
Max Power	770 W
Weight (With cooling fan)	280 g
ESCs	
Max Allowable Current (Continuous)	25 A
Operating Voltage	50.4 V(12S LiPo)
Signal Frequency	30 - 450 Hz
Drive PWM Frequency	12 kHz
Foldable Propeller	
Material	High-performance engineered plastics
Diameter × Pitch	21×7 inch
Weight	58 g
Spraying System	
Spray Tank	
Volume	10 L
Standard Operating Payload	10 kg
Max Battery Size	151 mm×195 mm×70 mm
Sprinklers	
Model	XR11001
Quantity	4
Max Spray Rate	0.45 L/min (Single nozzle, using water)
Spray Width	4 - 6 m (4 nozzles, 1.5 – 3 m above the crops)
Droplet Size	130 - 250 μm (Depending on operating environment and spraying speed)





Radar Terrain Follow System	
Detection Range	1 - 5 m (Varies when flying above different kinds of vegetation)
Working Range	1.5 - 3.5 m
Detection Accuracy	< 10 cm
Flight Parameters	
Total Weight (Excluding battery)	MG-1S: 10 kg, MG-1S RTK: 10.2 kg
Standard Takeoff Weight	23.8 kg
Max Takeoff Weight	24.8 kg (At sea level)
Max Thrust-Weight Ratio	1.71 (Takeoff weight of 23.8 kg)
Hovering Accuracy (P-mode or F-mode, strong GNSS signal)	D-RTK enabled: horizontal ± 10 cm, vertical ± 10 cm D-RTK disabled: horizontal ± 0.6 m, vertical ± 0.3 m (0.1 m, Radar Terrain Follow System enabled)
GNSS*	GPS+GLONASS
Battery	DJI approved battery pack (Model: MG-12000)
Max Power Consumption	6400 W
Hovering Power Consumption	3800 W (Takeoff weight of 23.8 kg)
Hovering Time*	22 min (Takeoff weight of 14 kg with a 12000 mAh battery)
	10 min (Takeoff weight of 23.8 kg with a 12000 mAh battery)
Max Operating Speed	7 m/s
Max Flying Speed	12 m/s (P-mode or F-mode, with GNSS), 15 m/s (A-mode)
Max Service Ceiling Above Sea Level	2000 m
Operating Temperature	32° to 104° F (0° to 40° C)
RTK Module (for MG-1S RTK only)	
GNSS Frequency	Mainland China/South Korea: GPS L1&L2, BEIDOU B1&B2 CE/FCC: GPS L1&L2, GLONASS F1&F2
Communication Frequency Band	Mainland China: 430–432 MHz South Korea: 447.8625–447.9875 MHz CE: 869.525 MHz FCC: 903–925.5 MHz
Max Transmission Range	Mainland China/South Korea/CE: 300 m FCC: 500 m (Unobstructed and free of interference with a height of 3.2 m from the D-RTK antenna to the end of the tripod and the aircraft flying above the vegetation at 1.5 m)
EIRP	Mainland China/South Korea: 10 dBm CE: 13 dBm FCC: 27dBm

* For the Asia-Pacific version of the MG-1S RTK, GNSS is GPS+GLONASS+BEIDOU when RTK is enabled. Estimated hovering time was measured at sea level and in wind speeds under 3 m/s. This value should be used for reference only.

Remote Controller	
Model	DLG60A
Operating Frequency	2.400 GHz to 2.483 GHz
Max Transmission Range	FCC: 1.5 km, CE/KCC/TELEC/SRRC: 1 km (Unobstructed and free of interference)
EIRP	FCC: 24 dBm, CE/KCC/TELEC/SRRC: 19 dBm
Built-in Battery	6000 mAh, 2S LiPo
Display Device	5.5 inch screen, 1920×1080, 1000 cd/m2, Android system, 4G RAM+16G ROM
Output Power	7 W
Operating Temperature	14° to 104° F (-10° to 40° C)
Storage Temperature	Less than 3 months: -4° to 113° F (-20° to 45° C) More than 3 months: 72° to 82° F (22° to 28° C)
Storage Temperature	41° to 104° F (5° to 40° C)
Remote Controller Charger	
Model	A14-057N1A
Voltage	17.4 V
Rated Power	57 W

Aircraft Status Indicator Description

Blinking Patterns		Description
	Blinking Red, Green and Yellow	Self-checking
 ×4	Blinking Yellow for 4 times	Warming up
	Slowly Blinking Purple	P-mode (GPS)
	Slowly Blinking Yellow	A-mode or P-mode/F-mode (no GPS)
	Slowly Blinking Green	F-mode (GPS)
 —	Solid Red	System error. Restart the aircraft, if still not working, contact DJI Support or a DJI authorized dealer.
	Alternately Blinking Red and Yellow	Abnormal compass data, compass calibration required
	Rapidly Blinking Red Several Times	Point A recorded
	Rapidly Blinking Green Several Times	Point B recorded
	Rapidly Blinking Blue Several Times	The aircraft flies to the next turning point in Smart Operation Mode.
 —	Solid Purple for one second	Entered Continuous Smart Operation Mode

	Rapidly Blinking Yellow	Remote controller signal lost
	Slowly Blinking Red	Low battery level
	Rapidly Blinking Red	Critical low battery level
 —	Solid Green	System Data Protection function working

Upgrading the Firmware

Aircraft Firmware

Connect the Micro USB port of the aircraft to DJI Assistant 2 on your computer to update the aircraft firmware. Refer to the [DJI Assistant 2 \(p. 48\)](#) section for details.

Remote Controller Firmware

Power on the remote controller and update the remote controller firmware in the DJI MG app.

1. Enter Operation View > System Status bar > Aircraft Status List to check the current firmware version. Follow the instructions in the DJI MG app to finish the update if there is a new version.
2. The Status LED will turn solid green when the update is successful. The LED will turn solid red if the update fails. Restart the remote controller and try again.



- The firmware update process takes approximately 10 minutes. We recommend finding a comfortable environment to carry out the update.
- Both the remote controller and aircraft firmware must be up-to-date, or else they will not link.
- Check the DJI MG app that you have the latest firmware installed before every flight.
- The firmware update requires an internet connection. Connect the display device to a Wi-Fi network whenever possible.
- Wait for the progress bar to reach 100% to ensure that the firmware update is complete.
- The remote controller status indicator glows solid blue during the update.
- DO NOT power off the remote controller during the update.
- DO NOT perform the firmware update while the aircraft is in the air. Only carry out the firmware update when the aircraft is on the ground.
- The remote controller may become unlinked from the aircraft after the firmware update. Relink the remote controller and aircraft if necessary.

DJI Support
<http://www.dji.com/support>

This content is subject to change.

Download the latest version from
<http://www.dji.com/product/mg-1s>

If you have any questions about this document, please contact DJI by sending a message to DocSupport@dji.com.

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